MAHON CREEK/POISON CREEK SPRING EXCLOSURES ENVIRONMENTAL ASSESSMENT

EA OR-025-00-27

Bureau of Land Management
Burns District Office
HC 74-12533 Hwy 20 West
Hines, OR 97738

NOVEMBER 2000

TABLE OF CONTENTS

MAHON CREEK/POISON CREEK SPRING EXCLOSURES
ENVIRONMENTAL ASSESSMENT
EA OR-025-00-27

I. INTRODUCTION

Three springs, one in the Miller Canyon Allotment and two in the Poison Creek Allotment, would be protected with fencing, with one of the three to be developed (by installing a headbox, pipe, and trough).

The three springs are:

1. Head of Mahon Creek, located in T. 23 S., R. 34 E., Section 27
2. Section 21 Spring, located in T. 18 S., R. 32 E., Section 21
3. Poison Creek Spring, located in T. 18 S., R. 32 E., Section 17

A. Purpose and Need

The springs are currently unprotected and therefore suffer excessive grazing and trampling. Fencing them would restore and protect the riparian vegetation around the spring areas and ensure a steady flow of clean water. At the head of Mahon Creek, the spring sits in the bottom of a steep draw and is subjected to excessive grazing on an annual basis. Because of the steep terrain leading into the spring, cattle tend to remain there once they make it down the draw. The overgrazing is causing bank deterioration and head cutting. Section 21 Spring is in a pasture that currently has no reliable livestock water, and this spring needs to be developed to provide a sufficient quantity of water for livestock and wildlife. Poison Creek Spring needs to be protected as a consequence of Poison Creek Reservoir being fenced off. Without protection, this spring would be receiving much more concentrated use than it has in the past (prior to the reservoir).

B Conformance with Land Use Plans

This Environmental Assessment (EA) is in compliance with management direction established in the Three Rivers Resource Management Plan (RMP) approved August 5, 1992.

II. PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action

The proposed action is to construct protection fences around three separate springs in the Three Rivers Resource Area. The protection fences would be built of barbed and smooth wire (3-wire with spacing as stated in Standard Design Features, Appendix 12 in the Three Rivers RMP). The corners at the two Poison Creek Allotment springs would consist of rock cribs or wood H-braces, while juniper trees and EZ panels would be used at the head of Mahon Creek. Due to lack of vehicle access, all materials would have to be packed in or dropped in by helicopter and the proposed fencelines would not be bladed or scraped. The fenced site at the head of Mahon Creek would be approximately 12 acres, and at Section 21 Spring would probably be no larger than one-fourth acre, but modifications could be made to encompass any archaeological concerns. The fenced exclosure at Poison Creek Spring would be approximately two or three acres. All spring developments would follow the standard procedures and design elements for range improvements described in Appendix 12 (Page "Appendices 180") in the 1992 Three Rivers RMP.

At Section 21 Spring, a headbox would be installed and a section of pipe (Schedule 80 PVC or better) would carry the water to a trough placed on a rocky shelf away from the head spring. Both the headwaters and overflow areas would be fenced and overflow would be returned to the original watercourse. To avoid compaction of soils and rutting of roads, all construction would be postponed until soils have dried out.

B. Alternative 1: Pole-style fence

This alternative is to construct a pole-style fence at the head of Mahon Creek, using junipers cut on site. This would eliminate the need to pack in (or helicopter in) the fence materials, and it would remove some excess junipers from the Mahon Creek drainage. The Miller Canyon Allotment Management Plan (AMP) identifies a need for juniper control to improve the range and riparian conditions in the allotment.

C. Alternative 2: No Action

This alternative is to not construct any of the spring protection fences.

III. AFFECTED ENVIRONMENT

A. Vegetation

All three sites would have the fencelines going through predominantly big sagebrush zones. The head of Mahon Creek also has juniper, and the draw leading down into the spring has a lot of aspen trees. The aspen stand is fairly decadent, with a lot of down trees and not much reproduction.

B. Wildlife

Elk, mule deer, pronghorn antelope, and a variety of small mammals and birds, including sage grouse, frequently use the subject springs.

C. Threatened and Endangered Species

There are no known threatened or endangered species in the project sites proposed. Site-specific botanical clearances would be completed prior to construction. Sage grouse, a Special Status species, are potentially at all these sites.

D. Cultural Resources

There are known archaeological sites at the three springs involved in the proposed project. Site-specific cultural clearances would be completed prior to construction. If sites are found, the projects would be redesigned to avoid any impacts, and the size of the exclosures would be adjusted based on cultural resource needs.

E. Soils

At the head of Mahon Creek, the soils at the spring are likely from the Welch series, and are very deep, formed as a result of alluvial deposition from the surrounding slopes. They have poorly drained clay loam at the surface and sandy clay loam subsurface. These soils are hydrophilic and of fine texture, so are highly susceptible to compaction and churning from hoof action. The soils are surrounded by Westbutte soils which occur on the adjacent slopes where some of the fence would be built. The Westbutte soils are moderately deep very stony loams that have a low potential for compaction due to the large percentage of rock, but compaction increases next to the spring because of increased moisture and frequency of use. These soils are highly susceptible to water erosion, are moderately corrosive to steel, and have a moderate shrink/swell capacity.

At the two spring sites in the Poison Creek Allotment, the soils mapped in the areas surrounding the springs (but not the springs themselves) are the Merlin and Observation soils. Average depth to bedrock for these soils are 10 to 40 inches, with the Merlin being shallower (low sagebrush sites). They are stony and cobbly and not prone to compaction, except next to the springs where there is increased moisture and frequency of use. Both soils are moderately corrosive to steel and are generally saturated following snowmelt. Access in the early part of the year can be limited, and the stoniness of the soil could complicate construction of water projects.

F. Recreation

The only recreation known to occur in the project area is occasional use by hunters.

G. Visual Resources

The project at the head of Mahon Creek is in a Class IV Visual Resource Management (VRM) zone (allows modification of landscape character). The two projects in the Poison Creek Allotment are in a Class II VRM zone (retention of landscape character).

IV. ENVIRONMENTAL CONSEQUENCES

There would be no effect on floodplains, wetlands, prime farmlands, paleontological resources, areas with unique characteristics, ecologically critical areas, Areas of Critical Environmental Concern, or invasive, nonnative species. There would be no effect on air or water quality. There would be no effects on minority or low-income populations.

A. Vegetation

Proposed Action: A small amount of vegetation would be displaced by the fences. The vegetation at the spring sources would benefit by being protected from grazing.

Alternative 1: A number of juniper trees would be removed at the head of Mahon Creek in order to construct the fence. The other two locations would see only a small amount of vegetation removed, and all vegetation inside the exclosures would benefit by being protected from grazing.

Alternative 2: Under no action, there would be no impacts on vegetation except for the fact that vegetation at the spring sources would continue to degrade due to overgrazing and trampling.

B. Wildlife

Proposed Action: The barbed wire fence could present some hazards to wildlife, but the greater protection for the spring sources that would be afforded by the new exclosures would benefit most wildlife species. Standard fence design features from the Three Rivers RMP would minimize adverse impacts to wildlife.

Alternative 1: The pole-type fence at the head of Mahon Creek would present less hazard to wildlife than a barbed-wire fence. Otherwise, the consequences would be the same as under the proposed action.

Alternative 2: Under no action, there would be no effects on wildlife.

C. Threatened or Endangered Species

There would be no impact on threatened or endangered species under the proposed action or either of the alternatives.

D. Cultural Resources

Proposed Action and Alternative 1: The fencelines would be adjusted to avoid going through any archaeological sites, therefore, under both alternatives there should be no adverse impact to cultural resources. Protection of springs should also protect the cultural resources.

Alternative 2: Under no action, there would be no effects on cultural resources.

E. Soils

Proposed Action and Alternative 1: Fencing the actual spring areas would greatly reduce soil compaction, as well as hoof action and subsequent churning of the wet soils. Potential for water erosion would be decreased in the fenced areas surrounding the springs, and the vegetative cover resulting from protection would help hold the soil in place. The tendency of cattle to congregate or trail along fencelines could lead to erosion and undermining the fenceline on the side slopes (especially at the head of Mahon Creek), but fencing off the spring should discourage cattle from venturing into the area.

No Action: Conditions at the springs would continue to deteriorate through hoof churning, compaction, and increased erosion.

F. Recreation

There would be no effects on recreation from the proposed action or either of the alternatives.

G. Visual Resources

Proposed Action and Alternative 1: At the head of Mahon Creek, the project is hidden down at the bottom of a steep draw and presents no conflicts with visual resource management in a Class IV zone. The two sites in Poison Creek Allotment, in a Class II zone, would be more visible, but the projects would be quite small in size and would not be visible from the highway.

Alternative 2: Under no action, there would be no impacts on visual resources.

V. CUMULATIVE IMPACTS

The cumulative impacts of the proposed action on the head of Mahon Creek would be positive in that the project would build on previous efforts to enhance the riparian area (a riparian pasture, change in season of use, juniper control) by fencing off the headwaters as well. The project would therefore result in even greater improvement in protecting vegetation, soils, cultural resources, and wildlife habitat. Excluding livestock from this small 12-acre area would not result in adverse cumulative impacts to the livestock operation: sufficient grazable areas remain available, and discouraging livestock from congregating in this pocket was desirable, anyway, from the livestock management viewpoint.

The cumulative impacts of the proposed action on the Poison Creek Allotment would similarly be positive in protecting even more of the spring sources in the Silvies River watershed, along with other resources such as wildlife habitat included within the exclosures. The improvement in livestock distribution resulting from the project would augment other management actions being taken to improve vegetation and range condition overall.

VI. CONSULTATION WITH OTHERS

Ken Bentz, Permittee
Wayne Smith
Jack Young, Permittee

VII. PREPARERS

Kyle Hansen, Range Management Specialist
Tim Kramer, Watershed Specialist
Craig Martell, Range Technician
Brian McCabe, Archaeologist
Fred McDonald, Natural Resource Specialist
Lesley Richman, Range Management Specialist
Ellie Sippel, Hydrologist
Fred Taylor, Wildlife Biologist
Nora Taylor, Botanist

VIII. APPENDICES

Appendix 1: Location Map for Head of Mahon Creek
Appendix 2: Location Map for Poison Creek and Section 21 Springs

Burns District
HC 74-12533 Highway 20 West
Hines, Oregon 97738

FINDING OF NO SIGNIFICANT IMPACT
for
MAHON CREEK/POISON CREEK SPRING EXCLOSURES
EA OR-025-00-27

Based on the analysis of potential environmental impacts contained in the Environmental Assessment (EA) and all other available information, I have determined that the proposal and alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts discussed in the EA have been disclosed. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests or the locality. The physical and biological effects are limited to the Burns District, Three Rivers Resource Area and adjacent land.

2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area wetlands, floodplains, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern. There would be no adverse impacts from invasive, nonnative species.

4. There are no highly controversial effects on the environment.

5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past action of a similar nature.

6. This alternative does not set a precedent for other projects that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource-related plans, policies or programs.

7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

8. Based on previous and ongoing cultural resource surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice policy.

9. No adverse impacts to any threatened or endangered species or their habitat, that was determined to be critical under the Endangered Species Act, were identified.

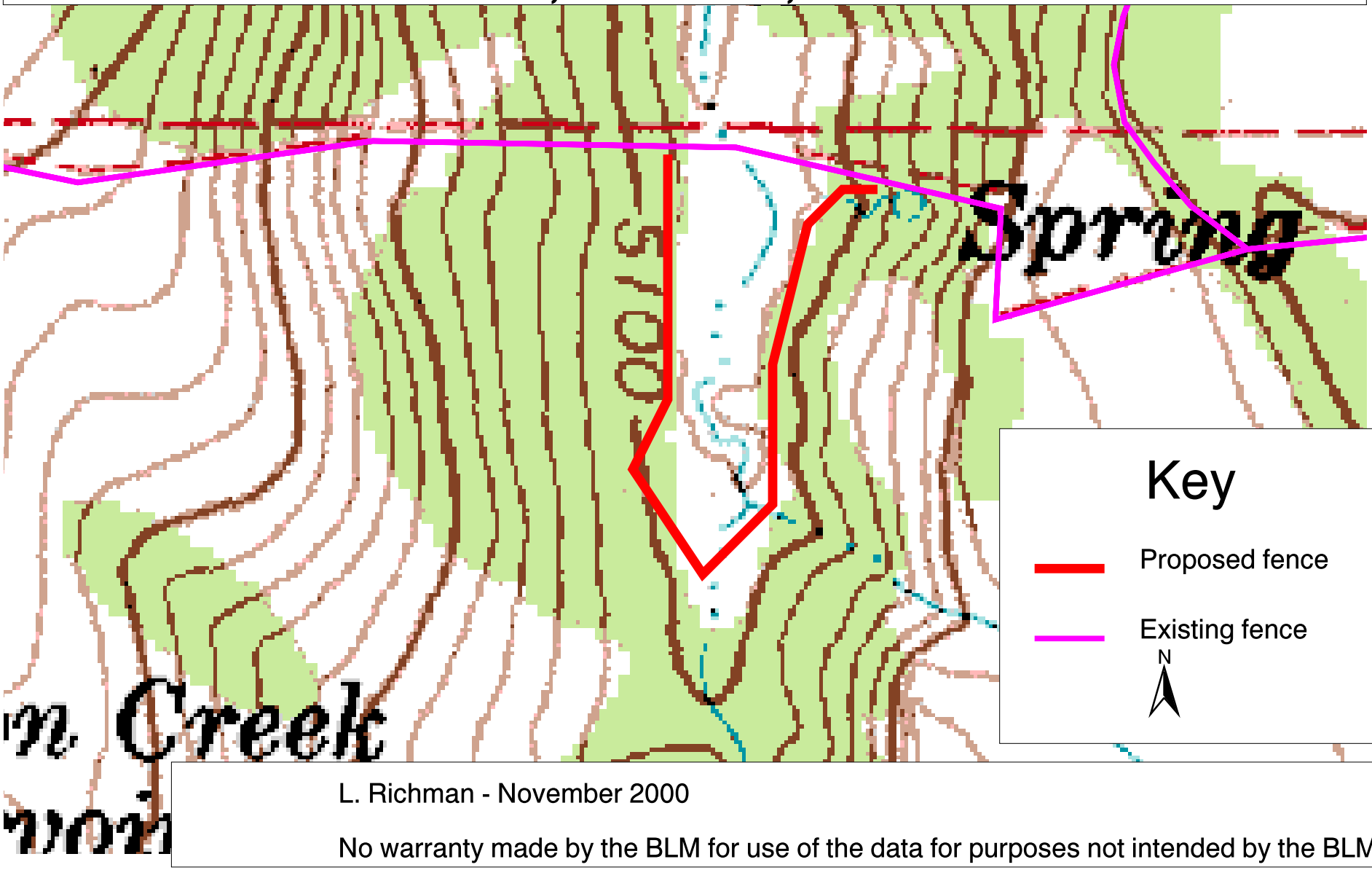
10. This proposed action is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

_____ _____

Craig M. Hansen Date
Three Rivers Resource Area Field Manager

Appendix 1. Location Map - Head of Mahon Creek

Location: T. 23 S, R. 34 E, Sec 27



L. Richman - November 2000

No warranty made by the BLM for use of the data for purposes not intended by the BLM.

Appendix 2. Location Map for Poison Creek and Section 21 springs

Location: T. 18 S., R. 32 E.